

**FY 2000 Subsistence Fisheries Project Narrative
Project #20**

Project Title: Kotzebue Winter Subsistence Sheefish Harvest

Investigator Organizations: ADF&G Sport Fisheries and Subsistence Divisions with local hires

Geographic Area: Arctic/Kotzebue/Norton Sound

Information Type: Harvest Monitoring

Issue Addressed: Sheefish are a very important subsistence resource in the Kotzebue area. Harvests are estimated for the Kobuk River villages and the sport fishery, but harvest in the winter under ice gill net fishery, which takes the largest number of fish of any of these fisheries, is not currently known.

Study Objectives:

1. To obtain a complete census of the harvest of sheefish in the under ice subsistence gill net fishery in Hotham Inlet near Kotzebue and
2. To estimate size and age composition of the harvest.

Project Description: This fishery usually takes place from November through February. With the assistance of ADFG-Subsistence Division, all subsistence gill net fishers would be contacted during September and October, prior to the beginning of the fishery. Their cooperation would be established and their participation ensured by contracting their services to keep catch records. A technician based in Kotzebue, trained by staff from the Subsistence Division, would make periodic visits to the fishers to collect and update catch information and to ensure accurate data collection. A complete census of the catch would be obtained in this manner. The technician would also sample fish to determine their length and age and assist in the collection of Traditional Ecological Knowledge (TEK) about spawning areas, populations and changes over time. The project leader would read scales and calculate estimates of age and size composition of the catch and write a report of the study findings. This project will be designed, planned, reviewed and executed according to the Sport Fish Division's operational planning process (see *Fisheries* 18(2):6-12).

Consultations Completed/Potential for Capacity Building: Contact with participants prior to the study, and contracting with fishers will enhance cooperation and capacity development while achieving biological study objectives. Local knowledge of abundance trends over time as indicated by fishery participants' recollection of past catches would provide insight into the condition of the sheefish population. The National Park Service in Kotzebue and Nome have consulted on the development of this project and support its implementation. Victor Karmun, with the Northwest Arctic Borough, Coastal Zone Management office was very supportive of this project. Willie Goodwin Northwest Arctic RAC chair, and Enoch Shiedt, Subsistence Specialist for Maniilaq Corp. were contacted by Ken Adkisson (NPS). Both were very supportive of this project. In addition, Randy Meyers, BLM in Kotzebue and Leslie Kerr, Selawik NWR were both contacted and interested in the project

Deliverables / Products: A completion report documenting harvest in numbers of sheefish, and estimates of the size and age composition of the harvest would be written by June 2001 for the ADFG-SF report series. Although this project would be carried out in FY 2001, planning and initial contact with fishers and equipment purchases would take place during FY 2000.

Costs:

Annual Budget Summary	ADF&G	Local Hires	Total
FY 2000	\$15.5 K	\$ 3.0 K	\$18.5 K
FY 2001	\$39.9 K	\$11.5 K	\$51.4 K
Total	\$55.4 K	\$14.5 K	\$69.9 K

The entire FY2000 budget will fund ADF&G for project planning, equipment purchase, and initial contacts with fishers. The subsequent budget will include \$11.5 for a local technician in Kotzebue for data collection. An additional \$8.0 will be provided to contract local fishers to keep catch records, and \$3.0 to Subsistence Division staff in Kotzebue for technician training and initial contact with fishers. In addition, a snow machine for use in the project may be purchased locally. The remainder will provide for ADFG for data analysis and project supervision, including A portion of this will be for biometric support.

**FY 2000 Subsistence Fisheries Project Narrative
Project #21**

Project Title: Dall River Area Northern Pike Population Studies

Investigator Organizations: ADF&G Sport Fisheries Division, Stevens Village Natural Resource Program

Geographic Area: Yukon River

Information Type: Stock Status and Trends

Issue Addressed: Increased recreational use of northern pike near Stevens Village is a source of conflict with local residents who use the fish for subsistence. The cooperative development of a fisheries management plan with Stevens Village along with joint stock assessment efforts is considered the optimal path to address concerns in a long term manner.

Study Objectives:

1. To estimate the size and age of northern pike inhabiting the Dall River and other Dall River tributaries in the Dall River Area.
2. To determine the proportion of pike that remain within the Dall River or move from other tributaries to the Dall River during the open water fishing season.

Project Description: In 1999 a cooperative project was initiated with the Stevens Village Natural Resource Program (SVNRP), the Alaska Department of Fish and Game (ADF&G), and the Yukon Flats National Wildlife Refuge (YFNWR) with an interim goal of developing a fisheries management plan for the Dall River area. Another management goal is the maintenance of quality northern pike fisheries for the mutual benefit of local and as appropriate non-local users. During 1999, ADF&G and SVNRP captured, measured and marked (320 with Floy tags and 42 with radio transmitters) northern pike in the Dall River drainage. The objectives were to determine the fidelity of pike to the Dall River during the fishing season and to estimate the proportion of adult pike in large size categories. All sampling and radio telemetry tracking objectives were attained by SVNRP and ADF&G field crews. YFNWF provided equipment and flights for aerial tracking. The FY2000 project would build on the 1999 stock assessment efforts. Information is needed on the degree to which pike spawning in other nearby Yukon River tributaries are vulnerable to exploitation in the Dall River fisheries. Radio telemetry will be used to determine rates of movement between tributaries. Northern pike will be measured, tagged and released to assess size and age composition of pike in the Dall River and in other nearby tributaries for comparison and to provide a benchmark for assessment of the effectiveness of management actions. This project will be designed, planned, reviewed, and executed according to the Division of Sport Fish's operational planning process (see *Fisheries* 18(2):6-12).

Consultations Completed / Potential for Capacity Building: During 1999 SVNRP provided personnel for the joint stock assessment project on the Dall River. In future seasons the role of SVNRP will include increasingly independent field work with the goal of building a stock monitoring program that is implemented by the SVNRP. ADFG will continue to provide technical support, review study designs, and assist in other ways as needed.

Deliverables / Products: Annual progress reports will be provided and a final report will be prepared detailing all study findings in the "Division of Sport Fisheries Data Series".

Costs: In FY2000 the project request will provide funding for staff and operational costs incurred by SVNRP and ADFG for project implementation, data analysis and report preparation.

Annual Budget Summary	ADF&G	SVNRP	Total
FY 2000	\$70.6 K	\$33.9 K	\$104.5 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #22**

Project Title: Hooper Bay Subsistence Salmon Test Fishing

Investigator Organizations: Hooper Bay Traditional Council, ADF&G Commercial Fisheries Division

Geographic Area: Yukon River

Information Type: Stock Status and Trends

Issue Addressed: Relatively large catches of chinook and summer chum salmon taken in coastal Yukon area communities are not formally monitored or sampled for age, sex, and size composition. Because these catches typically occur two to three days before the salmon enter the Yukon River mouth, they could form the basis for early season indications of run strength and age composition.

Study Objectives:

1. Collect, compile, and report catch rate statistics and age-sex-length (ASL) sample data from chinook and chum salmon catches in the Hooper Bay, and Black River subsistence fisheries.
2. Report summary data to the fisheries managers in Emmonak each day.

Project Description: This three-year project will consist of two technician-level staff, who will conduct daily interviews with subsistence fishers in the Hooper Bay, and Black River traditional subsistence salmon fishing areas to determine daily catch rates by species, and collect ASL samples from captured salmon from May through mid July. Catch rates will be calculated from catch and effort statistics following standard effort conventions established for all gill net fisheries statewide. Subsistence catches of chinook and chum salmon will be sampled for age, sex and length following Department-standard ASL catch sampling procedures.

Catch rate data will be summarized on forms provided by the Department, and reported to the area manager in the Emmonak office each day on the daily project reporting schedule. Preliminary sex proportions and length summary data will also be compiled on Department forms and relayed during the daily schedule. These data will be used by area management staff to preview the salmon runs two to three days before they enter the mouth of the Yukon River. This is especially critical in year 2000 because of a forecast for very poor chinook and chum salmon runs for the third year in a row, exacerbated by the heavy dependence on these stocks by commercial and subsistence salmon fishers.

Consultations Completed / Potential for Capacity Building: Initial consultations have been completed with the Hooper Bay Traditional Council, Hooper Bay City Office, and Association of Village Council Presidents who were all very supportive. This project will build local capacity by employing and training local residents of Hooper Bay to collect, compile, and report fundamental fisheries data.

Deliverables/Products: The primary deliverables will be a report that summarizes daily inseason catch rate and ASL statistics on captured chinook and chum salmon in the coastal Yukon area. Secondary deliverables will be raw catch and ASL data. Results will be reported in the Yukon area Annual Management Report.

Costs: \$90,000. The total cost of the project will be split between the Department of Fish and Game (\$10.7 k per year) and the Hooper Bay Traditional Council or City of Hooper Bay (\$19.3 k per year), largely for local hire.

Annual Budget Summary	Hooper Bay	ADF&G	Total
FY 2000	\$19.3 K	\$10.7 K	\$30.0 K
FY 2001	\$19.3 K	\$10.7 K	\$30.0 K
FY 2002	\$19.3 K	\$10.7 K	\$30.0 K
Total	\$57.9 K	\$32.1 K	\$90.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #23**

Project Title: Distribution Patterns of Humpback Whitefish in the Upper Tanana River Drainage.

Investigator Organizations: USFWS Fairbanks Fisheries Resources Office, Tetlin National Wildlife Refuge, and local hires

Geographic Area: Yukon River

Information Type: Stock Status and Trends

Issue Addressed: Residents of the upper Tanana River drainage have expressed concern that humpback whitefish populations are dwindling in certain areas where they were previously found in abundance. Recent sampling, aging and genetic work conducted by the US Fish and Wildlife Service, suggests that populations of humpback whitefish segregate themselves into different regions of the upper drainage during the summer. However, patterns of humpback whitefish movements into feeding, spawning and wintering areas are virtually unknown. Understanding the movement patterns of upper Tanana River humpback whitefish is an important first step in evaluating suspected changes in their abundance.

Study Objectives:

Year 1:

1. Determine if it is feasible to apply radio transmitters to humpback whitefish in the upper Tanana River drainage to evaluate movement patterns;
2. Identify the seasonal movements of radio-tagged humpback whitefish through scheduled aerial surveys.

Years 2 and 3:

1. Identify summer feeding, fall spawning and wintering areas for upper Tanana River drainage humpback whitefish in 3 different regions of the upper river;
2. Determine if there are multiple spawning stocks, and if they segregate into different regions of the drainage during the year;
3. Determine if humpback whitefish populations are local residents or long-distance migrants in the Tanana River drainage.

Project Description: Little is known about the normal movements of humpback whitefish in the upper Tanana River drainage. Additionally, radio telemetry studies with humpback whitefish and other coregonid species have often concluded with ambiguous results, due to the loss of signal through equipment failure, unexpected fish movements beyond the survey area, or mortality of radio-tagged fish. A pilot study is therefore suggested for the first year of the project. Geographic distribution of tagged fish will be determined through bi-monthly aerial surveys throughout the summer and fall months (June thru October), and through alternate month surveys through the winter months (November thru April). Success or failure of the radio-tagging project will be assessed by determining apparent natural mortality, harvest, migration out of the system, unexplained loss of signal, and apparent normal behavior of the 24 pilot subjects. Provided that the pilot study is judged to be a success, the second and third years of the proposed study would be directed towards determining seasonal movements of fish from 3 tagging locations, possibly inhabited by distinct spawning populations.

Consultations Completed / Potential for Capacity Building: Local subsistence users in the upper Tanana River drainage, primarily from Tanacross, Tetlin and Northway, have communicated their concerns about humpback whitefish populations to staff of the Tetlin National Wildlife Refuge. In response to these concerns, USFWS staff conducted a rigorous sampling project in 1998, gathering critical information about the current distribution, age composition and genetic structure of humpback whitefish in certain areas of the upper river. Local residents have been kept informed of the results of this work, and remain interested and supportive of further study.

Deliverables/Products: A report on the humpback whitefish pilot radio telemetry study will be completed by February, 2001. The report will be in standard scientific form, and will be a joint effort between the staffs of Tetlin National Wildlife Refuge and the Fairbanks FRO.

Annual Budget Summary	Federal Agency	Local Hire	Total
FY 2000	\$49.0 K	\$ 4.0 K	\$53.0 K
FY 2001	\$31.5 K	\$ 4.0 K	\$35.5 K
FY 2002	\$31.5 K	\$ 4.0 K	\$35.5 K
Total	\$112.0 K	\$12.0 K	\$124.0 K

**FY 2000 Subsistence Fisheries Project Narratives
Project #24**

Project Title: Pilot Station Sonar Technician Support

Investigator Organizations: The Association of Village Council Presidents, Inc.

Geographic Area: Yukon River

Information Type: Stock Status/Trends

Issue Addressed: Additional staffing for ADF&G sonar projects contributes to the effectiveness of data collection for in-season management, while providing local residents with direct involvement and improved technical understanding of sonar enumeration methods and results.

Study Objectives:

1. Recruit and hire two qualified AVCP region resident to assist with the ADF&G Pilot Station sonar project.
2. Provide employee orientation and administrative support to insure their success throughout the season.

Project Description: Two fisheries technician will be hired locally to aid ADF&G at the Pilot Station Sonar. They will assist ADF&G in conducting species apportionment test fisheries, sonar counting operations, and other field activities. Employment will be for 13 weeks from June 5 through September 3, 2000.

Consultations Completed/Potential for Capacity Development: ADF&G Commercial Fisheries Division staff have assisted in developing this project and expressed support for acquiring these technical positions. ADF&G has integrated previous technicians provided through AVCP-BSFA funds into the sonar station operations and provided technicians with a direct and meaningful role, while learning about the project operations. ADF&G will participate with AVCP in the selection and training of the technicians.

Deliverables/Products: A final report will be prepared on the duties performed by the technicians hired, potential capacity development for AVCP, their term of employment, and hours worked.

Costs: \$30,300. This figure includes the two technicians salary and fringe benefits at \$25,000 along with 1 month of AVCP Resource Specialist's time, at \$5,300.

Annual Budget Summary	AVCP	Total
FY 2000	\$ 30.3 K	\$ 30.3 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #25**

Project Title: Abundance and Run Timing of Adult Salmon in Henshaw Creek, Koyukuk River Drainage, Alaska

Investigator Organizations: USF&WS Fairbanks Fisheries Resources Office, local hires in Allakaket and Alatna

Geographic Area: Yukon River

Information Type: Stock Status and Trends

Issue Addressed: Chinook and chum salmon from Henshaw Creek contribute to the subsistence and commercial fisheries harvest in the Yukon River drainage. However, accurate monitoring of specific stocks from the Koyukuk river drainage is very limited. Escapement monitoring for three years will provide in-season information and allow for post season analysis of management practices.

Study Objectives:

1. Determine daily escapement and run timing of adult salmon into Henshaw Creek,
2. Determine sex and size composition of chinook and chum salmon in Henshaw Creek, and
3. Determine presence and movement of resident species in Henshaw Creek.

Project Description: A resistance board weir will be used to determine the salmon escapement in Henshaw Creek for three years. The weir will be in place from approximately the third week of June until the middle of August. A fish trap will be used to sample fish for age, length, and sex as they move up to spawning areas in the river. A camp will be established in association with the weir for the crew. The crew, including crew leader, will consist of four people on site at least for the first year of study. Hiring emphasis will be on local hires. The material for the weir will be provided by the Service from the weir that was used on the South Fork Koyukuk River.

Consultations Completed / Potential for Capacity Building:

A counting tower was used on Henshaw Creek during July 1999 and was staffed by residents from the nearby villages of Allakaket and Alatna. A presentation of the weir operation was made to the Allakaket Tribal Council on December 14, 1999. This project is identified in the Yukon River Comprehensive Salmon Management Plan (1998).

Deliverables / Products:

A report on the results from the weir study will be completed each fall. The report will include text of methods and result, tables, and graphical representation of the results.

Annual Budget Summary	Federal Agency	Local Hires	Total
FY 2000	\$37.1 K	\$ 33.2 K	\$70.3 K
FY 2001	\$31.1 K	\$ 33.2 K	\$64.3 K
FY 2002	\$31.1 K	\$ 33.2 K	\$64.3 K
Total	\$ 99.3 K	\$ 99.6K	\$198.9 K

**FY 2000 Subsistence Fisheries Project Narratives
Project #26**

Project Title: Collecting Traditional Ecological Knowledge on Fishes Used for Subsistence in Eagle and Circle, Alaska

Investigator Organizations: Native Villages of Eagle and Circle, Yukon Charley National Reserve

Geographic Area: Yukon River

Information Type: Traditional Ecological Knowledge

Issue Addressed: Collecting TEK on salmon and other species of fish used for subsistence by residents of Circle and Eagle.

Study Objectives:

1. To collect basic information on the distribution of salmon spawning areas near Eagle and Circle, including areas that may have supported spawning populations in the past that are no longer productive.
2. To collect information regarding habitat preferences, life histories, population trends and stock usage of whitefish, pike, sheefish, burbot, grayling, suckers and other freshwater fishes used for subsistence.
3. To use TEK to identify critical resource management, monitoring and research issues related to local subsistence fisheries.
4. To build local capacity in documenting TEK utilizing a semi-directive interview technique described by Huntington (1998).¹

Project Description: The ADF&G Subsistence Division documents subsistence use of chinook, fall and summer chum, and coho salmon for the communities of Eagle and Circle, but has not conducted community harvest surveys to collect information on the use of other freshwater fishes for subsistence. This study will begin to address this lack of information by convening a meeting of elders and other residents from Eagle and Circle to: 1) document TEK regarding salmon and other freshwater fish, and 2) use the TEK information as a basis for scoping critical subsistence management issues and identifying resource monitoring and information needs.

The group sessions will be conducted using a semi-directive interview technique to collect information from participants. This is a standard ethnographic method that has been successfully employed in Alaska Native and Russian Native coastal communities to gather TEK regarding beluga whales.

Consultations Completed/Potential for Capacity Building: The tribal councils of Circle Village and the Native Village of Eagle have met with officials of the Yukon-Charley National Preserve and the U.S. Fish and Wildlife Service to consider critical subsistence issues and discuss how the villages could participate in the subsistence resource monitoring program. This project is designed to build capacity within the communities of Eagle and Circle to conduct semi-directive interviews to collect and document fisheries resource use patterns both past and present.

The Native Village of Eagle will be the contractor for this project on behalf of both villages. Lisa Fox will be the principal investigator and project manager. Gary Ricketts, management consultant for Eagle and Circle, will assist in project review and preparation of the final report.

Deliverables/Products:

1. A report documenting TEK of subsistence fisheries resources collected from group interviews conducted with community elders.
2. A report describing critical issues affecting subsistence fisheries utilized by the residents of Circle and Eagle and a prioritized list of resource monitoring and information needs.

Costs:

Annual Budget Summary	Village of Eagle	Total
FY 2000	\$ 30.0 K	\$ 30.0 K

Huntington, Henry P. 1998. Observations on the Utility of the Semi-directive Interview for Documenting Traditional Ecological Knowledge. Arctic, 51(3): 237–242.

**FY 2000 Subsistence Fisheries Project Narrative
Project #27**

Project Title: Extend the Current Goodnews River Salmon Escapement Monitoring

Investigator Organizations: ADF&G Commercial Fisheries Division

Geographic Area: Kuskokwim Area

Information Type: Stock Status and Trends

Issue Addressed: Current monitoring efforts of valuable subsistence fishery resources are inadequate. The project currently is not funded to operate through coho salmon spawning run. Crew size limits the effectiveness of collecting biological information from chinook salmon, Dolly Varden and whitefish, and from the subsistence and commercial fisheries. Management of Goodnews River subsistence fish stocks could be significantly improved through OSM support in a cooperative effort with ADFG and the Native Village of Goodnews Bay.

Study Objectives:

1. Estimate coho salmon escapement for three years in the middle fork Goodnews River.

Project Description: A floating weir has been operated on the Middle Fork Goodnews River since 1997 through a cooperative effort of the USFWS, ADFG, and the Native Village of Goodnews Bay. Coho escapement monitoring has occurred during 1997, 1998 and 1999. For 2000, the project is only funded through the chinook, sockeye and chum salmon runs. This proposal will fund the ADFG crew (2-technicians) and operation for an additional 8 weeks to monitor coho salmon escapement.

Consultations Completed / Potential for Capacity Building: Consultation and annual agreements have been ongoing since 1996 with ADF&G, Traditional Council of Goodnews Bay, Bering Sea Fishermen's Association, and Togiak NWR. During the past two seasons high school students from Goodnews Bay rotated into the weir crew and received training on the project operation.

Deliverables / Products: Escapement estimates will be available for all species migrating up the middle fork Goodnews River from June to the end of September. Daily communication of escapement numbers will occur between project staff and ADFG Commercial Fisheries Office in Bethel. A final project report will be written by ADFG Biologist. Long term monitoring will allow for better in-season management decisions in the future.

Costs:

Annual Budget Summary	ADF&G	Totals
FY 2000	\$25.0 K	\$25.0 K
FY 2001	\$25.0 K	\$25.0 K
FY 2002	\$25.0 K	\$25.0 K
Total	\$ 75.0 K	\$ 75.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #28**

Project Title: Extend Kanektok River Salmon Escapement Monitoring to include coho salmon.

Investigator Organizations: Native Village of Kwinhagak Natural Resource Department, King Salmon Fisheries Resources Office, Togiak National Wildlife Refuge

Geographic Area: Kuskokwim Area

Information Type: Stock Status and Trends

Issue Addressed: Current monitoring efforts of subsistence fishery resources are inadequate. This project would extend current escapement monitoring activities to include coho salmon to ensure subsistence harvests needs are met.

Study Objectives:

1. Estimate coho salmon escapement for three years in the Kanektok River.

Project Description: A floating weir has been constructed through a cooperative effort of the USFWS, Native Village of Kwinhagak (NVK), Bering Sea Fishermen's Association (BSFA), ADF&G, and the Bering Sea Coastal Villages and will be installed in the Kanektok River in year 2000. Initial year costs, include equipment (gas powered rock hammer) and helicopter transport of weir panels to the project site. The project will be operated by NVK and ADFG during the chinook, sockeye and chum salmon runs (May - July). This request will fund helicopter and equipment cost for installation, and 8 weeks (August - September) of operation to monitor coho salmon escapement.

Consultations Completed / Potential for Capacity Building: Consultation and annual agreements have been in place since 1996 with ADF&G, Native Village of Kwinhagak IRA, Bering Sea Fishermen's Association, Bering Sea Coastal Villages, and Togiak NWR. Previous efforts sought to use a counting tower in the lower Kanektok River. Through much involvement by the NVK Natural Resource Department and Traditional Council this project is being converted to a floating weir. The current project is supervised and staffed locally by employees of NVK. ADFG has, and will continue to, provide personnel support. Cooperators combined share of funding and in-kind is approximately \$122K.

Deliverables / Products: Escapement estimates will be available for all species migrating up the Kanektok River from June to the end of September. Daily communication of escapement numbers will occur between the NVK project leader and ADFG Commercial Fisheries Office in Bethel. A final project report will be written by the NVK Biologist with review by ADFG and USFWS Biologist. Long term monitoring will allow for better in-season management decisions in the future.

Costs:

Annual Budget Summary	USFWS	NVK	Total
FY 2000	\$ 6.0 K	\$ 27.8 K	\$33.8 K
FY 2001	\$ 1.5 K	\$ 23.5 K	\$25.0 K
FY 2002	\$ 1.5 K	\$ 23.5 K	\$25.0 K
Total	\$ 9.0 K	\$ 74.8 K	\$83.8 K

**FY 2000 Subsistence Fisheries Project Narratives
Project # 29**

Project Title: Documentation and Communication about Floating Weirs

Investigator Organizations: The Association of Village Council Presidents, Inc.

Geographic Area: Kuskokwim River Drainage.

Information Type: Stock Status/Trends

Issue Addressed: Opposition to the use of weirs for salmon population monitoring has been widespread and intense in the AVCP region for many years. Local residents have been concerned that weirs kill fish and obstruct local boat traffic. During the summer of 1999, the Yukon Delta National Wildlife Refuge provided support for local residents to visit the ADF&G/Kuskokwim Native Association weir on the George River to become more familiar with weir operations and impacts. The weir visits helped to inform local residents about the value of the information being collected in improving fisheries management. At its Kwinhagak meeting in October 1999, the Yukon Delta Regional Council heard from Council member Bill McCann, as he described what he learned on the visit to the weir. In the 1999 Annual Convention, AVCP reversed its former opposition to the use of weirs, and the Village of Kwethluk has developed a cooperative weir project on the Kwethluk River. Additional documentation and communication on floating weirs will build broader community support in the lower Kuskokwim River communities. Potential participation includes residents of the villages of Akiak, Akiachak and Tulaksak (and any others interested).

Study Objectives:

1. To document and provide additional public information to Kuskokwim River Drainage villages about weir methods and impacts through education visits to weirs, and a public radio segment.
2. To promote understanding that weirs are an appropriate and necessary method form of salmon enumeration, and could be used in other tributaries to improve salmon management.

Project Description: From late-May through mid-July 1999, AVCP will organize several one-day trips for several individuals to two functioning floating weirs within the region to demonstrate operations and to give first-hand experience. It will be modeled after the 1999 USFWS (YDNWR) trips to the George River Weir. Mary Gregory from the YD Regional Council will participate and provide a public radio segment afterwards. AVCP will continue consultations with KYUK public television to send a videographer on a trip to record video footage for latter use in a public television segment. AVCP will coordinate this task, but cost arrangements for video documentation will be developed between the Office of Subsistence Management and KYUK directly.

Consultations Completed/Potential for Capacity Development: Depending on which weir is visited, the following agencies will have a part in the project: AVCP, ADF&G, Kuskokwim Native Association (KNA), and the USFWS. AVCP has discussed the video component with KYUK and received a positive response.

Deliverables/Products: AVCP will provide a brief project report at the end of the season, describing the participation in weir visits, and the results of the trips, with copies of any public radio and television segments that resulted.

Costs:

Annual Budget Summary	AVCP	Total
FY 2000	\$ 11.2 K	\$ 11.2 K

Estimated Costs: \$11,200. Of this, \$5,500 represents travel costs for participants in the weir visits, and \$5700 represents the AVCP Fisheries Biologist time to coordinate, implement, and report on the project.

**FY 2000 Subsistence Fisheries Project Narrative
Project #30**

Project Title: Site Surveys for Kuskokwim River Salmon Assessment Projects.

Investigator Organizations: ADF&G Commercial Fisheries Division, Kenai Fisheries Resources Office, Yukon Delta National Wildlife Refuge

Geographic Area: Kuskokwim River

Information Type: Stock Status and Trends

Issue Addressed: Salmon runs originating from tributaries of the lower Kuskokwim River on Service lands and upriver tributaries above federal lands contribute to one of Alaska's largest and fastest growing subsistence fisheries. Managers have little escapement information for sockeye, chum, chinook and coho salmon on which to base subsistence, commercial and sportfishing management decisions to ensure the continued productivity of these populations.

Study Objective:

1. To determine site feasibility for establishing resistance board or a new design of fish weir in lower Kuskokwim River tributaries, including a deep water weir on the lower Kisaralik River.

Project Description: A crew of two will be transported by air or boat to several river systems to identify and survey potential sites for future installation of salmon run assessment projects (preferably floating weirs). Initial surveys will be made from the air. Once identified, a crew will be dropped off with a raft and equipment to document the physical characteristics of potential sites (width, depth profiles, flow speeds, substrates, etc.)

Candidate systems include, but are not limited to, the Aniak, Eek, Kisaralik, Kasiglok, Holukuk, Owhat, and Fog Rivers. Candidate systems in the middle Kuskokwim River, especially those with sockeye populations also need to be surveyed.

Consultation Completed/Potential for Capacity Building: Meetings have been held with AVCP, ADF&G, and USFWS concerning the need for additional weir projects in the Kuskokwim River drainage. Efforts will be made to contract with local organizations to help with site surveys and the construction and operation of weir projects.

Deliverables/Products: A prioritized listing of potential weir sites including detailed descriptions of locations and physical characteristics.

Costs:

Annual Budget Summary	USFWS	ADF&G	Total
FY 2000	\$ 5.0 K	\$ 22.0 K	\$27.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #31**

Project Title: Sockeye Salmon Escapement Estimation for the Alagnak River Drainage

Investigator Organizations: Bristol Bay Native Association, ADF&G Commercial Fisheries Division, Katmai National Preserve

Geographic Area: Bristol Bay

Information Type: Stock status and trends

Issue Addressed: Inadequate in-season information to ensure subsistence opportunity on federal land. The Alaska Department of Fish and Game (ADFG) counted the escapement of salmon into the Alagnak drainage during the early 1970's, but cut the program as part of overall funding cuts in 1977. This study will provide the National Park Service (NPS), ADFG, and BBNA with data necessary to ensure that subsistence fishery management provides for subsistence harvest on federal land in the Alagnak River corridor.

Study Objectives:

1. To estimate the escapement of sockeye salmon for two years in the Alagnak River through the operation of a counting tower.

Project Description: Escapement counts throughout the Bristol Bay region are performed by ADFG. Where the escapement at any one time primarily reflects a single species, tower counts are preferred due to their low cost and feasibility. The Alagnak River salmon escapement consists primarily of sockeye, chinook, and coho salmon. There is some overlap in return timing, but not enough to warrant more intensive counting methodologies. The contribution of the Alagnak system to the Bristol Bay commercial fishery is usually lower than the contributions of the Kvichak and Naknek systems, but is sometimes quite significant. Without escapement counts to monitor the passage of fish up into the federal boundary, there is no way to ensure that subsistence needs are met in a fishery zone primarily managed for Naknek and Kvichak escapements.

This project will fund ADFG for management oversight, equipment, supplies, training, and data distribution, and BBNA to staff the counting tower. The tower will be staffed by four seasonal employees, including one crew leader. Park Service involvement will be primarily in coordination and assistance with site selection and permitting processes. Counts are taken of fish passage for 20 minutes of each hour throughout the 24 hours of each day. Night counts are facilitated by shining a focused light beam into the water to illuminate passing fish. White plasticene panels on the river bottom make fish more readily visible for counts during both day and night. Age and length distribution data will be collected from salmon seined as they migrate up the river.

Consultation Completed/Potential for Capacity Building: This proposal is jointly sponsored by NPS, BBNA, and ADFG. The Village of Levelock, a member of BBNA, is the primary source of subsistence use of the Alagnak River. This project will facilitate interagency cooperation, and provide each partner with data necessary to successfully manage their programs. It will also provide an opportunity to test the feasibility of this partnership arrangement before making long-term commitments to collection of this data.

Deliverables/Products: Alagnak escapement counts will be incorporated into the annual management reports of ADFG and will be widely available. There will be data collected to ensure provision of adequate subsistence harvest opportunities for subsistence users on the federal land within the Alagnak River corridor.

Cost: The table below shows the detailed funding request. Yearly funding requested to BBNA totals \$65,000, while funding requested for ADFG is \$78,500 in the first year and \$46,500 in subsequent years.

Annual Budget Summary	BBNA	ADF&G	Total
FY 2000	\$65.0 K	\$78.5 K	\$143.5 K
FY 2001	\$65.0 K	\$46.5 K	\$111.5 K
Total	\$130.0 K	\$125.0 K	\$255.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #32**

Project Title: Sockeye Salmon Escapement in the Buskin River

Investigator Organizations: ADF&G Sport Fisheries Division with local hires

Geographic Area: Kodiak Island/Gulf of Alaska

Information Type: Stock Status and Trends

Issue Addressed: The Buskin River Subsistence Sockeye Fishery has the largest number of participants of any subsistence fishery in the Westward Region. The fishery has averaged about 400 fishermen annually over the past 5 years, and subsistence sockeye harvests have averaged 4,400 fish. The minimum escapement goal is 8,000 sockeye and escapements have averaged 11,600. Monitoring the sockeye return in the Buskin River is a very important project because of the high subsistence use it receives and because minimum spawning escapements are barely achieved each year. Information gathered from this project will support the evaluation of the current escapement goal. The fishery occurs in the Federal Alaska Maritime Refuge and the river flows through the U.S. Coast Guard Base uplands. The subsistence fishery is the major harvester of Buskin River's Sockeye.

Study Objectives:

1. Census the sockeye salmon escapement into Buskin Lake from June 1 to August 15.
2. Estimate the age, sex, and length composition of the sockeye salmon escapement into Buskin Lake from June to July 15.
3. Estimate the age, sex, and length composition of the subsistence harvest of sockeye salmon in marine waters adjacent to the Buskin River mouth from June 1 to July 15.
4. Investigate relocating/modifying the weir so that it can be installed lower in the river to facilitate a complete sockeye count can be accomplished (including Lake Louise and Lake Genevieve tributaries).

Project Description: Three ADFG technicians will install the weir at Buskin Lake outlet during the last week of May, so that the weir will be fully operational by June 1. Salmon will be enumerated daily, through August 15, when most of the return is complete. The escapement will be sampled for age, sex, and length data at the weir trap. Locally hired fisheries technicians will collect biological samples from the subsistence fishery harvest. ADF&G staff will investigate possible weir sites in the lower river as well as weir design modifications that will enable the weir to remain operational during high water events.

Consultations Completed/Potential for Capacity Building: The Sport Fish Division currently operates a weir in the Buskin River to enumerate coho from August 15 through October 1. The Division will give preference to local residents when job openings occur.

Deliverables/Products: Information from this project will be used to manage current fisheries so that minimum escapement objectives are achieved. Biological data (age, sex, and size composition) will be combined with statistics from past years. When data from a sufficient number of years is collected, brood tables will be constructed and a review of the escapement goal will be completed. The escapement goal review will be presented in Fisheries Data Series Report. Data collected annually will be presented in two department reports: the Kodiak Management Area Salmon Escapement Cumulative Counts for Fish Weirs, Regional Information Report and Area Management Report for the Recreational Fisheries of the Kodiak and Alaska Peninsula/Aleutian Islands Regulatory Area.

Costs: FY 2001 costs include purchase and installation of a new weir.

Annual Budget Summary	ADF&G	Local Hires	Total
FY 2000	\$ 2.3 K	\$ 16.2 K	\$18.5 K
FY 2001	\$ 53.7 K	\$ 35.8 K	\$89.5 K
FY 2002	\$ 4.2 K	\$ 35.8 K	\$40.0 K
Total	\$ 60.2 K	\$ 87.8 K	\$148.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #33**

Project Title: Angler Effort Index for the Alagnak River

Investigator Organizations: ADF&G Commercial Fisheries, Bristol Bay Native Association, Village of Levelock, Katmai National Preserve

Geographic Area: Bristol Bay/AP/Kodiak

Information type: Harvest Monitoring

Issue Addressed: The Alaska Department of Fish and Game monitors the sport fishery on the Alagnak River through their statewide mail-in sport fish survey. They also conduct creel surveys of chinook and coho fishing on some parts of the river on a cyclical basis; their next effort is scheduled for 2001. Both increases in use of the Alagnak River over the last 20 years and the size of the river make on-site creel survey design challenging. An index of the effort, location, and seasonal distribution of sport angling on the river would aid in the design and implementation of improved data-gathering for on-site creel surveys. This sport fishing effort index would also provide the National Park Service with data on river use for purposes river corridor planning and valuable data on sport fishing effort as it relates to the maintenance of subsistence harvest opportunities.

Study Objectives:

1. To describe areas and seasons of greatest fishing intensity on the Alagnak River.
2. To provide recommendations to improve design of intensive creel and effort surveys on this river.

Project Description: The Village of Levelock patrols the river sporadically throughout the summer, primarily to protect Native allotments from trespass. River patrols will be adapted to provide an opportunity for data collection on the sport anglers throughout the river corridor. Two citizens of the Village of Levelock will travel up the Alagnak River three times per week by jet boat to the confluence of the Alagnak and the Nonvianuk Rivers. For each party encountered they will record the date, time, river reach (location), whether the party is associated with motorized or non-motorized boats, and the number of anglers in the party. Detailed sampling protocols will be developed with technical review by ADFG, BBNA, and NPS. Data will be provided to BBNA, NPS and ADFG during the summer, and summarized and analyzed during the winter by an NPS seasonal employee. The analysis will focus on patterns of seasonal distribution of angler effort in the different reaches of the river. The overall angler effort indicated will provide data that can be compared with the overall number of angler days indicated by the statewide mail-in harvest survey conducted by ADFG. In the development of a summer operational plan, NPS, ADFG, BBNA and Levelock will all have opportunity to ensure that the study plan and protocols developed are satisfactory. Primary coordination and training of employees in the field will be done by NPS employees, with some assistance from ADFG, and periodic consultations on the river throughout the summer will provide management oversight of the data gathering effort.

Consultation Completed/Potential for Capacity Building: This proposal is a joint proposal among ADFG, BBNA, and NPS, and is widely supported by neighboring communities, villages, and other groups with a vested interest in the project. Letters of support are available from the agencies indicated as co-sponsors of the project. A resolution of support has been adopted by the Village of Levelock, and letters are pending from other interested organizations. This project will facilitate interagency cooperation, provide each partner with data necessary to successfully manage their programs, result in training for village staff conducted by BBNA and supervised by NPS and ADFG, and provide important data to aid in the design of more intensive creel and effort data collection.

Deliverables/Products: Alagnak angler distribution and effort data will be summarized in a report by NPS. The results of this study will be important for long-term planning of the ADFG creel surveys on the Alagnak and for the ongoing Alagnak river corridor planning effort.

Cost:

Annual Budget Summary	BBNA	ADF&G	NPS	Total
FY 2000	\$20.0 K	\$9.5 K	\$11.2 K	\$40.7 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #34**

Project Title: Miles Lake Sonar Improvement

Investigator Organizations: USFS Chugach National Forest Cordova Ranger District, ADF&G Commercial Fisheries Division

Geographic Area: Cook Inlet/Gulf of Alaska

Information Type: Stock Status and Trends

Issue Addressed: The concrete pad used for the track for the sonar counter is in need of repair, and must be improved prior to any upgrade of the sonar technology. Accurate in-season escapement counts of sockeye and chinook salmon are needed to properly manage the highly important subsistence, personal use, and commercial fisheries of the Copper River.

Study Objectives:

1. Repair the concrete pad for improved operation of present sonar counter and for eventual replacement equipment.

Project Description: The Alaska Department of Fish and Game operates a sonar near Miles Lake on the Copper River to estimate the escapement of chinook and sockeye salmon. The concrete pad which holds the track for the counter is in need of repair. The repair work is detailed in the Miles Lake Sonar Substrate Repair project operational plan, written by J. Johnson, ADF&G Cordova. This work has been needed for a number of years, but State funding has not been available. Johnson states that the repair will improve the current sonar operation and is necessary before any equipment upgrades can be made.

In FY 2000, ADF&G proposes to reactivate their permits for this project, advertise for construction bids, award the contract, and proceed with the construction in the fall of 2000 when water levels in the Copper River are low. As additional funding becomes available, they plan to upgrade the sonar equipment to further improve the escapement counts. Johnson says that the construction of the pad is the first necessary step and their immediate priority.

Consultations Completed / Potential for Capacity Building: This project has been discussed with ADF&G, who have been trying to obtain funding for this project since 1991. ADF&G has already discussed the construction project with one local contractor. We are providing copies of all proposals to the Native Village of Eyak and are awaiting comments and discussion.

Deliverables / Products: An improved sonar system and in turn, more accurate escapement data for chinook and sockeye salmon in the Copper River Basin.

Costs:

Annual Budget Summary	ADF&G	USFS	Local Contractor	Total
FY 2000	\$ 7.5 K	\$ 1.0 K	\$ 50.0 K	\$ 58.5 K

USFS \$1,000 contract administration, ADF&G \$7,500 overhead and administration, Local construction preliminary estimate: \$50,000.

**FY 2000 Subsistence Fisheries Project Narrative
Project #35**

Project Title: Extend Coghill Lake Adult Escapement Weir Operations

Investigator Organizations: USFS Chugach National Forest Glacier Ranger District, ADF&G Commercial Fisheries Division

Geographic Area: Cook Inlet/Gulf of Alaska

Information Type: Stock Status and Trends

Issue Addressed: Coghill Lake contains one of the largest coho runs in western Prince William Sound and is an important commercial, sport and subsistence fishery, yet we do not have knowledge of the escapement or run timing. Its close proximity to Whittier increases the likelihood of conflicts between users due to the Whittier road opening this year which is expected to increase use in Prince William Sound by over 600 percent. It is important to possess such knowledge before such conflicts occur. Residents from Whittier harvest coho with hook and line in the Coghill estuary and river for subsistence. This is also a popular sport fishery for fishermen from Anchorage. The river is within federal administrative boundaries.

Study Objectives:

1. Continue to operate adult weir from August through September to determine spawning escapement and run timing of coho salmon in Coghill Lake.
2. Determine the age, sex, and length composition of coho salmon at the weir site.
3. Daily in-season reporting of escapement data to state and federal management staff for use in the management of subsistence, commercial and sport fisheries.

Project Description: There is currently an adult weir managed by ADF&G that is used to monitor chum, pink, and sockeye salmon, however, it is decommissioned before coho enter the river. Because the weir is already operational, we could gain important additional information with minimal costs. Funding would be provided to ADF&G to continue operation of the adult weir through the coho migration period. The proposed project would be conducted over a three year period.

Consultations Completed/Potential for Capacity Building: This project will be completed under contract with ADF&G and PWSAC coordinated through Jay Johnson (ADF&G, Commercial Fisheries) . Although the village of Tatitlek does not harvest coho at Coghill, both Gary Kompkoff and Steve Totemoff of the Tatitlek IRA stated they support further investigations to determine run size of coho into the Coghill system. Pete Kompkoff of the Chenega IRA also support the project. Jim Fall (ADF&G, Subsistence) has been contacted and the project was presented at the Southcentral Regional Advisory Council meeting on March 2nd .

Deliverables/Products: This project will provide daily counts of coho salmon entering Coghill River as well as estimates of age, length, and sex composition.

Costs: Project funding will be assessed annually and re-authorized by the USFS based on availability of funds and program needs.

Annual Budget Summary	USFS	Local Hires	ADF&G	Local Hires	Total
FY 2000	\$ 3.0 K	\$ 2.0 K	\$ 10.0 K	\$ 15.0 K	\$ 30.0 K
FY 2001	\$ 3.0 K	\$ 2.0 K	\$ 10.0 K	\$ 15.0 K	\$ 30.0 K
FY 2002	\$ 3.0 K	\$ 2.0 K	\$ 10.0 K	\$ 15.0 K	\$ 30.0 K
Total	\$ 9.0 K	\$ 6.0 K	\$ 30.0 K	\$ 45.0 K	\$ 90.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #36**

Project Title: Western Prince William Sound Salmon Escapement Surveys

Investigator Organizations: USFS Chugach National Forest Glacier Ranger District, ADF&G Sport Fisheries & Commercial Fisheries Divisions, and local hires

Geographic Area: Cook Inlet/Gulf of Alaska

Information Type: Harvest Monitoring

Issue Addressed: Escapement counts are necessary to manage commercial, subsistence and sport fisheries at selected sites within western Prince William Sound (PWS). These areas contain small runs of fish that could easily be over-harvested. Because of weather, topography, and heavy canopy cover, it is difficult to obtain aerial estimates at these locations. Additionally, aerial surveys for coho are not conducted at the proposed sites in PWS.

Study Objectives:

1. Conduct ground surveys to determine escapement of sockeye and coho salmon.

Project Description: Known sockeye and coho systems will be surveyed on foot in their entirety to determine overall escapements for a three year study period. Counts for sockeye will not be conducted where there is adequate aerial coverage such as Shrode Lake. Determining biological capabilities of the systems will be conducted as part of another project scheduled for 2001. Sites surveyed will include Shrode Lake, Red Creek, Billy's Hole, Otter Creek, Pigot Bay, and Columbia Lake. This is an ongoing project building upon previous surveys. At some sites we have fifteen years of escapement information collected with this methodology. This project is designed to coordinate with a proposal to conduct creel surveys of Prince William Sound to determine what proportion of the escapement is harvested by sport and subsistence fishermen. The creel survey project design is currently under development for FY 2001.

Consultations Completed/Potential for Capacity Building: This project will be conducted by the USFS coordinated with ADF&G. Andy Hoffman (Sport Fish) and Tim Joyce (Commercial Fisheries) have been consulted and support the project. Gary Kompkoff, and Steve Totemoff of the Tatitlek IRA and Pete Kompkoff of the Chenga IRA have been consulted and encourage these types of projects. Jim Fall (ADF&G, Subsistence) has been contacted and the project was presented at the Southcentral Regional Advisory Council meeting on March 2nd.

Deliverables/Products: Run timing and total escapement by species and location. Data shared with ADF&G and entered into a central GIS database.

Costs: Project funding will be assessed annually and re-authorized by the USFS based on availability of funds and program needs.

Annual Budget Summary	USFS	Local Hires	Total
FY 2000	\$ 5.0 K	\$ 10.0 K	\$15.0 K
FY 2001	\$ 5.0 K	\$ 10.0 K	\$15.0 K
FY 2002	\$ 5.0 K	\$ 10.0 K	\$15.0 K
Total	\$ 15.0 K	\$ 30.0 K	\$45.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #37**

Project Title: Cutthroat Trout Distribution and Abundance

Investigator Organizations: USFS Chugach National Forest Glacier Ranger District, ADF&G Commercial Fisheries Division.

Geographic Area: Cook Inlet/Gulf of Alaska

Information Type: Stock Status and Trends

Issue Addressed: The cutthroat trout is considered a subsistence resource by both the Chenega and Tatitlek Indian Reorganization Act Councils (IRA's), and is also harvested by residents of Hope, Cooper Landing, and Whittier. The cutthroat trout populations documented in western Prince William Sound (PWS) are small and relatively isolated from one another. With the increased fishing pressure resulting from the Whittier access project, there is concern that even small increases in harvest levels may adversely affect the viability of these sensitive populations.

Study Objectives:

1. Determine the distribution and relative abundance of cutthroat trout in western PWS.
2. Incorporate results into GIS for development of a risk analysis model.

Project Description: In this three year study, we propose to investigate lakes and streams in western PWS with a high probability of containing cutthroat trout to further describe their distribution and abundance. Emphasis will be placed upon sites near the villages of Chenega and Tatitlek that receive fishing effort. Although past efforts (Prince William Sound Aquaculture Corporation, 1981-83, EVOS projects 93106 and 97302) have contributed significantly to the understanding of cutthroat trout in PWS, there remain many other areas that contain a high probability of containing this species. We will use GIS to identify possible sample sites that contain cutthroat trout based on variables that have a strong association with the presence of this species.

Consultations Completed/Potential for Capacity Building: This is a cooperative project between USFS and the Alaska Department of Fish and Game. Consultations have been completed with Andy Hoffman (ADF&G, Sportfish). Recent review of the proposal at the ADF&G area meeting indicates support for the project. Pete Kompkoff of the Chenega IRA and Gary Kompkoff of the Tatitlek IRA are also interested in the conservation of cutthroat trout and support the project. Jim Fall (ADF&G, Subsistence) has been contacted and the project was presented at the Southcentral Regional Advisory Council meeting on March 2nd.

Deliverables/Products: All results will be submitted for inclusion in the Alaska Department of Fish and Game Anadromous Waters Catalog. Reports will be produced and data will be presented in GIS format. The results will be used to develop a risk assessment model for cutthroat trout populations in PWS based upon environmental processes and anthropogenic influences, such as subsistence and sport fishing.

Costs: Project funding will be assessed annually and re-authorized by the USFS based on availability of funds and program needs.

Annual Budget Summary	USFS	Local Hires	Total
FY 2000	\$ 10.0 K	\$ 15.0 K	\$25.0 K
FY 2001	\$ 10.0 K	\$ 15.0 K	\$25.0 K
FY 2002	\$ 10.0 K	\$ 15.0 K	\$25.0 K
Total	\$ 30.0 K	\$ 45.0 K	\$75.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #38**

Project Title: Extend Russian River and Cooper Creek Weirs Season Extensions

Investigator Organizations: ADF&G Sport Fisheries Division with local hires

Geographic Area: Cook Inlet/Gulf of Alaska

Information Type: Stock status and trends

Issue Addressed: The Kenai River and and Cooper Creek are heavily utilized by sport fishers as well as subsistence users residing in Cooper Landing and Snug Harbor. However, there is a general lack of information on populations of salmon, rainbow trout and Dolly Varden in the upper Kenai drainage and an important and growing need exists for comprehensive population data on these species to avoid over harvesting and potential user conflicts.

Study Objectives:

1. To extend operations and data collection at the Russian River weir for 59 days.
2. To extend operations and data collection at the Cooper Creek weir for 40 days.
3. To determine the size and run timing of salmon, rainbow trout and Dolly Varden populations in the Russian River and Cooper Creek.

Project Description: The Alaska Department of Fish and Game currently operates wiers on the Russian River and Cooper Creek for a few weeks during the summer but they are not in operation long enough to provide comprehensive population and run timing data. This project will extend weir operations at both sites to allow ADF&G to collect more complete data regarding stock status and trends.

Consultations Completed/Potential for Capacity Building: ADF&G Sport Fisheries Division has been consulted and have verbally agreed to extend the length of time that the weirs are in operation, pending availability of funds. Local hires will be used to the greatest extent possible.

Deliverables/Projects: A report documenting population information including run timing, escapement, and age, sex and length of salmon, rainbow trout and Dolly Varden in the Russian River and Cooper Creek.

Costs: Project funding will be assessed annually and re-authorized by the USFS based on availability of funds and program needs.

Annual Budget Summary	ADF&G	Local Hires	Total
FY 2000	\$ 10.0 K	\$ 17.0 K	\$27.0 K
FY 2001	\$ 10.0 K	\$ 17.0 K	\$27.0 K
FY 2002	\$ 10.0 K	\$ 17.0 K	\$27.0 K
Total	\$ 30.0 K	\$ 51.0 K	\$81.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #39**

Project Title: Developing of Salmon Escapement Data Base

Investigator Organizations: USFS Seaward Ranger District Chugach National Forest

Geographic Area: Cook Inlet/Gulf of Alaska

Information Type: Stock status and trends

Issue Addressed: Data on salmon populations and stock status and trends is necessary for timely, comprehensive analyses of fishery regulatory proposals and inseason management. This project will compile existing data from the Alaska Department of Fish and Game and make it accessible through the Chugach National Forest geographic information system.

Study Objectives:

1. To incorporate escapement and population data from the Alaska Department of Fish and Game and incorporate it into the Chugach National Forest GIS.

Project Description: The project will gather ADF&G escapement data, index stream salmon counts and other population data related to salmon and transfer the metadata to the Chugach GIS stream layer. Specific escapement data will be transferred to the Chugach GIS in a compatible format. This will provide subsistence fisheries managers easier access to the salmon population information necessary to address requests for subsistence fisheries regulatory proposals.

Consultations Completed/Potential for Capacity Building: ADF&G Commercial Fisheries and Sport Fisheries Divisions have been consulted on the project.

Deliverables/Projects: Geographically referenced information on salmon populations and escapements in the Chugach National Forest. This will include a database accessible by Chugach National Forest personnel.

Costs:

Annual Budget Summary	USFS	Total
FY 2000	\$ 25.0 K	\$25.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #40**

Project Title: Copper River Subsistence Salmon Fishery Evaluation 2000

Investigator Organizations: ADF&G Division of Subsistence, Copper River Native Association, the Mt. Sanford Consortium and the Village of Chistochina, and local hires

Geographic Area: Cook Inlet/Gulf of Alaska

Information type: Traditional Ecological Knowledge, Harvest Monitoring

Issue Addressed:

1. Long term changes in the ecology of Copper River salmon through the documentation of traditional ecological knowledge.
2. Potential changes in the salmon fishery in light of new state regulatory classifications.
3. Current trends and characteristics of the subsistence fish wheel fishery.

Study Objectives:

1. Record the traditional knowledge of Ahtna elders and other residents of the region as related to the ecology of Copper River salmon.
2. Using quantitative and qualitative methods assess the potential effects of the regulatory reclassification by the Alaska State Board of Fisheries of the personal use dip net fishery to a subsistence fishery.
3. Using similar methods assess the current trends and characteristics of the subsistence fishwheel fishery by describing and analyzing the relationship between fish wheel owners, fish wheel users, and the number of permits issued; and documenting current harvest levels, local observations of abundance, location of effort, and issues of displacement.

Project Description: Information from Ahtna residents of the upper Copper River indicate a number of changes in the ecology of the river and salmon stocks. For instance, local people have indicated that salmon can no longer be found in certain small tributaries of the river. Using interviews with Ahtna elders, conducted by local people, this project will assess long-term changes in the disposition of salmon stocks in the Copper River. This project will also identify current changes in the fishery by documenting local observations of abundance, effort and issues of displacement and comparing those observations to quantitative measures of participation and harvests. Fishery performance in the subsistence fishwheel fishery will be evaluated using two case studies of specific fishing areas: the Chitina Airport and Copperville. Interview topics will focus on issues of crowding, and the migration of dipnet fishers into the upriver subsistence fishery.

Consultation Completed/Potential for Capacity Building: Staff from the Division of Subsistence has initiated contact with staff from the Copper River Native Association, the Mt. Sanford Consortium and the Village of Chistochina. Each of these organizations has received a project summary. Within the near future members of all organizations will meet to discuss the project. Subsistence Division staff also met and discussed the project with the National Park Service and U.S. Forest Service.

Deliverables/Products: In collaboration with tribal entities involved in the project, Subsistence Division staff will prepare a written report that will include a discussion, analysis, and summaries of both the qualitative and quantitative data collected during the research phase.

Costs:

Annual Budget Summary	Native Groups	State Agency	State Local Hire	Total
FY 2000	\$40.0 K	\$53.0 K	\$15.0 K	\$108.0 K

**FY 2000 Subsistence Fisheries Project Narrative
Project #41**

Project Title: Eulachon Subsistence Use and Ecology Investigations

Investigator Organizations: USFS Chugach National Forest Glacier Ranger District, ADF&G Sport Fish and Commercial Fisheries Divisions, with local hires

Geographic Area: Cook Inlet/Gulf of Alaska

Information Type: Harvest Monitoring

Issue Addressed: The eulachon fisheries in Turnagain Arm are popular subsistence and personal use fisheries. Eulachon are also an important forage fish for the beluga whale, another subsistence resource. In the Twentymile River, it is thought that the eulachon population may be declining; however, we lack conclusive evidence. Although most use occurs from Anchorage residents, results of interviews conducted in 1997 indicate that eulachon fishery is an important subsistence specie for rural residents of Hope and Cooper Landing, and fishermen from as far as Willow, Trapper Creek, and Talkeetna. If, in fact, the population is declining and harvest success is low, there could be a resource allocation issue in the future.

Study Objectives:

1. Determine use of the eulachon fisheries (user demographics, catch data).
2. Characterize and map upper limits of spawning and critical spawning habitat
3. Conduct biomass surveys as an index of relative run strength.
4. Determine run timing and other aspects of eulachon biology (fecundity, age, etc.) in Twentymile River.
5. Determine presence/absence of eulachon in the Portage Creek and Placer River drainages.
6. Collect samples for a larger eulachon study to determine stock composition and interception in the Pacific.

Project Description: This multi-year study will be coordinated with the ADF&G eulachon project on the Copper River Delta. Harvest data collection will be consistent with the findings of the Statewide Subsistence Harvest Assessment. Key spawning locations will be mapped and characterized using GIS. We will also conduct biomass surveys of larval eulachon to determine population trends. These methods are consistent with those employed elsewhere (British Columbia and lower 48) and sampling will be coordinated with other efforts throughout the range of eulachon. We will determine run timing and other aspects of eulachon biology. Presence and absence sampling will occur in Portage Creek and Placer River, two adjacent streams. Samples will be collected for a larger eulachon study to determine stock composition and interception in the Pacific.

Consultations Completed/Potential for Capacity Building: Consultations have been conducted with Barry Stratton (ADF&G Sport Fish). The proposal was reviewed at the ADF&G area meetings and received support. ADF&G will also be contributing some in-kind services. Additional partners include: the University of Alaska Anchorage (UAA); University of Alaska Fairbanks (UAF), the Department of Fisheries and Oceans (DFO) in British Columbia, Canada; and the National Oceanic & Atmospheric Administration (NOAA). James Showalter and other elders of the Kenaitze IRA are very concerned about the apparent decline in the Twentymile River eulachon fishery and encourage this work. Jim Fall (ADF&G, Subsistence) has been contacted and the project was presented at the Southcentral Regional Advisory Council meeting on March 2nd. The project will coincide with a similar eulachon study on the Copper River Delta (Steve Moffitt, ADF&G Commercial Fisheries).

Deliverables/Products: This project will yield estimates of total use and catch as well as information on the demographics of resource users. Maps locating critical spawning habitat and the upper limits of migration will be created and spawning habitat will be characterized. Other aspects of eulachon ecology will also be summarized such as fecundity, age, and sex ratio. In addition, a baseline will be established for long term population monitoring using results from the biomass estimates.

Costs: The total budget is \$57,000 of which \$17,000 will be provided by UAA, UAF, ADF&G, DFO, and NOAA. The USFS will fund the remaining \$40,000. Project funding will be assessed annually and re-authorized by the USFS based on availability of funds and program needs.

Annual Budget Summary	Organizations	USFS	Local Hires	Total
FY 2000	\$20.0 K	\$5.0 K	\$15.0 K	\$40.0 K
FY 2001	\$20.0 K	\$5.0 K	\$15.0 K	\$40.0 K
FY 2002	\$20.0 K	\$5.0 K	\$15.0 K	\$40.0 K
Total	\$60.0 K	\$15.0 K	\$45.0 K	\$120.0 K

